

S.N. 09/658,731  
Art Unit 2617

REMARKS/ARGUMENTS:

This paper is herewith filed in response to the Examiner's Office Action mailed on August 11, 2006 for the above-captioned U.S. Patent Application. This office action is a final rejection of the claims 1-15.

More specifically, the Examiner has rejected all pending claims 1-15 based under 35 USC 103(a) as being unpatentable over Lin (US 5831976) in view of Elliott (US 6438376) and in further in view of Jensen (US 6405043). The rejection is respectfully disagreed with and traversed below.

The Examiner concedes that the combination of Lin and Elliott fails to disclose predetermining, for each base station, a classification according to a probability of interference at the channel with other base stations of the plurality of base stations upon a request of at least one mobile station to initiate communication via a base station. As a result, the Examiner relied on Jensen to address the failure of Lin and Elliott to disclose this limitation.

The independent claims 1, 8 and 15 recite in part "predetermining (or predetermine), for each base station, a classification for each channel according to the probability of interference at the channel with other base stations of the plurality of base stations upon a request of at least one mobile station to initiate communication via a base station." The applicant asserts that none of the references Lin, Elliott or Jensen disclose or suggest claims 1, 8 and 15.

In the rejection of the claims 1, 8 and 15, the Examiner cites Jensen column 9, lines 15-50 and states "in rejoinder to the applicant's argument that Jensen doesn't teach, **"upon a request of at least one mobile station to initiate communication via a base station"** (as claims 1, 8 and 15 recite in part), it is noted that Jensen supports the assertion as, the signal received from the mobile transmitter to the cell site or a base station can easily interpret the claimed invention." Respectfully, the applicant disagrees with the Examiner.

Jensen is directed to “a computer implemented process which compares signals communicated between a known position and a plurality of base stations in a cellular telephone system to determine the level of interference with a signal on a channel expected to serve the known position, and determines a value indicating a probability of interference with a signal on a channel expected to serve the known position” (col. 5, lines 1-10).

In the reference cited by the Examiner, Jensen discloses “a second method of collecting signal strength data provides substantial economies ... when new sites are being planned and a particular site has not yet been selected” (col. 9, lines 15-18). Jensen discloses that “tests have shown that the signal strength received at a cell site from the mobile transmitter in an uplink transmission is on an average the same as the signal strength which would be received at a mobile unit from a cell site in a downlink transmission” (col. 9, lines 18-22). Further, Jensen discloses that “if the uplink and downlink signal strengths differ, comparable values may be obtained by adjusting the amplifications and power values” (col. 9, lines 22-25). These disclosures relate to the strength of a signal in either the uplink or downlink direction. However, there is nothing here which discloses or suggests the claims 1, 8 and 15.

Jensen discloses that “drive tests are conducted by placing a single transmitter in a mobile unit and using fixed receivers (rather than expensive scanning receivers) at all of the proposed positions at each of the sites over an area for which new cells are proposed,” as opposed to “conducting drive tests with transmitters placed at each proposed cell site, as in the first method, and checking each against the other” (col. 9, lines 24-27). Here Jensen simply discloses a different way of doing a drive test as part of a second method for implementing the system.

Moreover, in the reference cited by the Examiner Jensen discloses that “the mobile unit drives over the roads encompassed by the new cells transmitting on a single frequency while all of the receivers attempt to detect the transmission ... The power level transmitted by the mobile antenna is measured at the mobile unit, and a

positioning system is linked to the mobile unit to provide position indications at each point of measurement ... The mobile transmitter sends a signal at the selected frequency, and the receivers at all of the cells measure its strength ... The position of the mobile unit for each of the test transmissions is recorded with the times of the transmissions in a database” (col. 9, lines 31-42). Further, “the signal strength received at each proposed site and the times of reception are recorded by each receiver ... Since the signal strength received at a cell site from the mobile transmitter in an uplink transmission is on an average the same as the signal strength which would be received at a mobile unit from a cell site in a downlink transmission (or may be adjusted to be so), the data gathered by the drive test using this second method may be directly substituted for the data gathered in the drive tests for the previous method” (col. 9, lines 42-50). Clearly, the reference in Jensen cited by the Examiner merely discloses a second method for “utilizing signal level data for an entire system to provide predictive plots which may be utilized to establish cell site positions and channel assignments” (col. 7, line 63 thru col. 8, line 1). The reference cited by the Examiner does not disclose or suggest claims 1, 8 and 15.

In addition, having accumulated the data in accordance with the first or second method, Jensen discloses that “not only may the process be used to update or plan a new system, the process also allows signal strength measurements derived from drive tests conducted using a particular type of cellular system such as an AMPS to be used for determining coverage and interference patterns for cell sites utilized by entirely different types of systems” (col. 10, lines 52-57). Furthermore, Jensen discloses that “the improved process relates not only the strengths of carrier signals and signals which interfere with those carrier signals but also determines the probability of occurrence of the various interfering signals and the severity of the interference during receipt of the interfering signal” (col. 11, lines 21-26). Jensen continues “this allows an interference value to be determined which essentially indicates the percentage of time a subscriber to a mobile system may expect to encounter perceptible interference at any point in the system” (col. 11, lines 26-30).

However, as claimed in the patent application the determination is “upon a request of

at least one mobile station to initiate communication via a base station,” as claims 1, 8 and 15 recite in part. Jensen simply does not disclose or suggest claims 1, 8 or 15.

In addition, Jensen discloses “the interference values for points within a sector, cell, and system may be accumulated and averaged ... to provide an interference value for sectors, cells, and the system” (col. 11, lines 29-32). In addition, Jensen discloses that “this allows an operator to pinpoint sectors and cells which need to be improved and provides an overall evaluation of a system from which an operator may rationally determine whether improvements need to be made” (col. 11, lines 32-36). Jensen discloses a method which uses a decision process that is performed by a human operator based on information that is acquired during the drive test of the entire system using data obtained by the first or second method (see col. 8, lines 23-27). Jensen does not disclose or suggest a process that is performed “**upon a request of at least one mobile station to initiate communication via a base station**” as claims 1, 8 and 15 recite in part.

Jensen discloses that “the interference values for points in a system are used to evaluate the efficacy of each change to the system as it is proposed,” and that “each type of change which might be made may be compared to other types of changes in order to make the most economical changes possible” (col. 11, lines 36-42). Thus, Jensen discloses a technique to alleviate interference problems in a system and to determine the effect of the change prior to its implementation. That is, the changes are made pursuant to prior system measurements that were made during the drive test of the entire system. The changes are not performed immediately or in real-time, and clearly not in response to a request from at least one mobile station.

The determination of the information in Jensen is performed at a subsequent point in time to when all interference measurements were made, based on a database of previously measured signal levels for an entire system that was obtained using one of two disclosed methods for obtaining the system data. In clear contrast, claims 1, 8 and 15 recite in part:

**“a classification for each channel according to the probability of interference at the channel with other base stations of the plurality of base stations upon a request of at least one mobile station to initiate communication via a base station”**

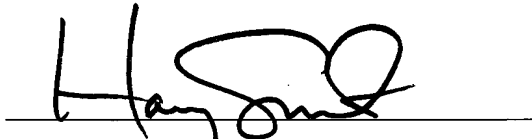
The claimed invention teaches that the classification occurs while the at least one mobile station is operating within a communication system. Clearly, for the reasons stated, Jensen does not disclose or suggest the claims 1, 8 and 15. As such, any attempt to combine Jensen with Lin and Elliot does not cure this deficiency, and does not render the claims unpatentable. Therefore claims 1, 8 and 15 should be allowed.

In addition, for at least the reasons stated above, and for the reason that claims 2-7 and 9-14 depend from claims 1 and 8 respectively; all claims 1-15 should be allowed.

The Examiner is respectfully requested to reconsider and remove the final rejection of claims 1-15, and to allow these claims.

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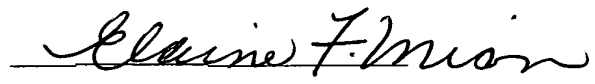
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